

8/27/2012 4:24 PM

DOCKET NO. D-1986-032 CP-2

DELAWARE RIVER BASIN COMMISSION

Discharge to a Tributary of Special Protection Waters

**Borough of Catasauqua
Wastewater Treatment Plant
Borough of Catasauqua, Lehigh County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by the Borough of Catasauqua (BC or docket holder) on March 12, 2012 (Application), for review of proposed modifications to an existing wastewater treatment plant (WWTP). National Pollutant Discharge Elimination System (NPDES) Permit No. PA0021580 for this project was approved by the Pennsylvania Department of Environmental Protection (PADEP) on November 1, 2007. The Commission received an Internal Review & Recommendation (IR&R) letter from the PADEP dated March 12, 2012 (received March 15, 2012) for Water Quality Management (WQM) Permits Nos. 3911401 and 3911402 for this project. Final issuance of these WQM Permits will occur upon approval of this docket.

The Application was reviewed for continuation of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Lehigh Valley Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on September 12, 2012.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew approval of the existing 2.25 million gallons per day (mgd) BC WWTP and its related discharge. This docket will also approve modifications to the existing WWTP, which include replacement of the disinfection system and parts of the primary digester, as well as the construction of an effluent pump station and floodwall. These modifications will not result in an increase to the hydraulic design of the WWTP.

2. **Location.** Treated effluent from the existing BC WWTP will continue to discharge to the Lehigh River at River Mile 183.66 – 20.2 (Delaware River – Lehigh River) via Outfall No. 001, in the Borough of Catasauqua, Lehigh County, Pennsylvania. The existing WWTP and its related discharge are located in the drainage area to the non-tidal Delaware River known as the Lower Delaware, which is designated Special Protection Waters (SPW) as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	40° 38' 53"	75° 28' 22"

3. **Area Served.** The WWTP will continue to service the Borough of Catasauqua and a portion of Hanover Township of which both are located in Lehigh County, Pennsylvania. It will also continue to service the Borough of North Catasauqua and a portion of Hanover Township of which both are located in Northampton County, Pennsylvania. For the purpose of defining the Area Served, Section B (Type of Discharge) and D (Service Area) of the docket holder's Application are incorporated herein by reference, to the extent consistent with all other conditions contained in the DECISION Section of this docket.

4. **Physical Features.**

a. **Design Criteria.** The docket holder operates the existing 2.25 mgd BC WWTP. The docket holder has proposed modifications to the existing facility that include replacement of the disinfection system and parts of the primary digester, as well as the construction of a floodwall. These modifications will not result in an increase to the hydraulic design of the WWTP.

b. **Facilities.** The existing WWTP consists of a Rotomat screening device, an influent pump station, a grit chamber, two (2) primary clarifiers, a primary trickling filter, a secondary trickling filter, two (2) final clarifiers with chlorine disinfection units, two (2) anaerobic digesters, and a belt filter press. The docket holder will be placing a previously constructed and recently rehabilitated ultraviolet disinfection channel into operation following the decommissioning of the chlorine disinfection unit.

The docket holder's wastewater treatment facility discharges to waters classified as SPW and is required to have available emergency power. The existing WWTP has a generator installed capable of providing emergency power. (SPW)

The docket holder's wastewater treatment facility is not staffed 24 hours per day, and shall have a remote alarm system that continuously monitors plant operations. The existing WWTP has a remote alarm system installed that continuously monitors plant operations. (SPW)

The docket holder's existing wastewater treatment facility has not prepared and implemented an emergency management plan (EMP) in accordance with Commission requirements. The docket holder is required as part of this docket approval to prepare and implement an EMP within 6 months of approval of this docket (See DECISION Condition II.s.). (SPW)

The docket holder is not performing substantial alterations or additions to the existing WWTP at this time and therefore did not have to include natural wastewater treatment technologies into the design for the current modifications. However, if in the future the docket holder proposes to perform modifications to the WWTP that meet the Commission's definition of substantial alterations or additions, a natural treatment alternatives analysis (NTAA) must accompany any request. (SPW)

The project facilities are located in the flood-fringe portion of the 100-year floodplain. The docket holder is proposing to construct a floodwall to protect the WWTP during a flood event, essentially flood-proofing the facilities to at least one (1) foot above the 100-year flood elevation. This is required now since the 100-year floodplain was modified after the initial approval of this facility in the late 1980s and recent rain events have warranted work be performed.

Wasted sludge will continue to be hauled off-site by a licensed hauler for disposal at a (State-approved) facility.

c. Water withdrawals. The potable water supply in the project service area is supplied by the Borough of Catasauqua, which was approved by the Commission on June 4, 2004 via Docket No. D-87-60 CP RENEWAL 2. Docket No. D-87-60 CP RENEWAL 2 is set to expire on June 4, 2014 and DECISION Condition III.o. requires a renewal application be submitted to the Commission at least 12 months prior to the expiration (by June 4, 2013).

d. NPDES Permit / DRBC Docket. NPDES Permit No. PA0021580 was approved by the PADEP on November 1, 2007 and includes final effluent limitations for the project discharge of 2.25 mgd to surface waters classified by the PADEP as a trout stocking fishery (TSF). The following average monthly effluent limits are among those listed in the NPDES Permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: DRBC Parameters Included in NPDES Permit

OUTFALL 001 (WWTP)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	30 mg/l	As required by NPDES Permit
Dissolved Oxygen	5.0 mg/l (minimum at all times)	As required by NPDES Permit
CBOD (5-Day at 20° C)	25 mg/l (85% minimum removal*)	As required by NPDES Permit
Ammonia Nitrogen (5-1 to 10-31) (11-1 to 4-30)	8.0 mg/l 20.0 mg/l	As required by NPDES Permit
Fecal Coliform	200 colonies per 100 ml as a geo. avg.	As required by NPDES Permit

* DRBC Requirement

EFFLUENT TABLE A-2: DRBC Parameters Not Included in NPDES Permit

OUTFALL 001 (WWTP)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	Monitor & Report *	Quarterly **
Total Phosphorus*	Monitor & Report *	Monthly *
Nitrate – N*	Monitor & Report *	Monthly *
Total Nitrogen*	Monitor & Report *	Monthly *

* DRBC Requirement

** See DECISION Condition II.w.

e. **Cost.** The overall cost of this project is estimated to be \$2,465,000 (See DECISION Condition II.k.).

f. **Relationship to the Comprehensive Plan.** The 1.77 mgd BC WWTP was included in the Comprehensive Plan on July 25, 1962 via Resolution No. 62-14. Docket No. D-86-32 CP approved the expansion of the WWTP to 2.25 mgd and its inclusion to the Comprehensive Plan on September 17, 1986. Issuance of this docket will continue approval of the 2.25 mgd BC WWTP in the Comprehensive Plan (See DECISION Condition I.c.).

B. FINDINGS

The purpose of this docket is to renew approval of the existing 2.25 mgd BC WWTP and its related discharge. This docket also approves modifications to the existing WWTP, which include replacement of the disinfection system and parts of the primary digester, as well as the construction of an effluent pump station and floodwall. These modifications will not result in an increase to the hydraulic design of the WWTP.

On July 16, 2008, the DRBC approved amendments to its *Water Quality Regulations* (WQR) that provide increased protection for waters that the Commission classifies as SPW. The portion of the Delaware River and its tributaries within the boundary of the Lower Delaware was approved for SPW designation.

Articles 3.10.3A.2.e.1). and 2). of the Commission's WQR states that projects subject to review under Section 3.8 of the Compact that are located in the drainage area of SPW must submit for approval a Non-Point Source Pollution Control Plan (NPSPCP) that controls the new or increased non-point source loads generated within the portion of the docket holder's service area which is also located within the drainage area of SPW. The service area of the docket holder is located within in the drainage area to the SPW. Since this project does entail additional construction and modifications of the facilities (i.e., there are new or increased non-point source loads associated with this approval), the NPSPCP requirement would normally be applicable at this time. However, the area of disturbance for the proposed floodwall is so minimal (<3,000 ft²) that the Commission is not requiring a plan to be submitted at this time. Instead the Erosion and Sedimentation Plan approved by the Lehigh County Conservation District will suffice. All other

work will occur within the facilities already in existence. Accordingly, DECISION Condition II.r. has been included in this docket.

The docket holder is not performing substantial alterations or additions to the existing WWTP at this time and therefore did not have to include natural wastewater treatment technologies into the design for the current modifications. However, if in the future the docket holder proposes to perform modifications to the WWTP that meet the Commission's definition of substantial alterations or additions, a NTAA must accompany such a request. Furthermore, a no measurable change (NMC) to existing water quality (EWQ) analysis would need to be performed in order to develop limits for the facility.

Data submitted by the docket holder supports the grandfathered loads found in Table B-1 below. The existing WWTP has remained unchanged (treatment consistency and flow) since the time of SPW designation and therefore monitoring data from 2005 through 2011 was used to establish average flows from May through September and October through April.

Table B-1: Grandfathered Loads

	TSS (lbs/day)	Phosphorous (lbs/day)	Ammonia – N (lbs/day)	TN (lbs/day)	Nitrate as N (lbs/day)
May-Sept*	93.88	23.79	13.29	175.24	132.96
Oct-April**	101.4	24.73	7.37	169.67	136.6

* Loads are associated with an average flow of 0.870 mgd

** Loads are associated with an average flow of 0.952 mgd

At the project site, the Lehigh River has an estimated seven-day low flow with a recurrence interval of ten years of 206 mgd (319 cfs). The ratio of this low flow to the average design wastewater discharge from the 2.25 mgd WWTP is 91.6 to 1.

The nearest surface water intake of record for public water supply downstream of the project discharge is performed by the North Penn Water Authority, 46.2 miles away on the Delaware River, which was approved by the DRBC via Docket No. D-1992-044 CP-3 on December 7, 2005.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

The limits in the NPDES Permit are in compliance with Commission effluent quality requirements, where applicable.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the Commission's *WQR*.

C. DECISION

I. Effective on the approval date for Docket No. D-1986-032 CP-2 below:

a. The project described in Docket No. D-86-32 CP is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1986-032 CP-2; and

b. Docket No. D-86-32 CP is terminated and replaced by Docket No. D-1986-032 CP-2; and

c. The project and the appurtenant facilities described in Section A “Physical Features” of this docket shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in Section A “Physical Features” of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP in its NPDES and WQM Permits, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.

b. The facility and operational records shall be available at all times for inspection by the DRBC.

c. The facility shall be operated at all times to comply with the requirements of the Commission’s *WQR*.

d. The docket holder shall comply with the requirements contained in the Effluent Tables in Section A.4.d. of this docket. The docket holder shall submit the required monitoring results directly to the DRBC Project Review Section. The monitoring results shall be submitted annually, absent any observed limit violations, by January 31. If a DRBC effluent limit is violated, the docket holder shall submit the result(s) to the DRBC within 30 days of the violation(s) and provide a written explanation that states the action(s) the docket holder has taken to correct the violation(s) and protect against any future violations.

e. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.

f. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

g. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

h. The discharge of wastewater shall not increase the ambient temperatures of the receiving waters by more than 5°F until stream temperatures reach 50°F, nor by more than 2°F when stream temperatures are between 50°F and 58°F, nor shall such discharge result in stream temperatures exceeding 58°F.

i. Sound practices of excavation, backfill and reseeded shall be followed to minimize erosion and deposition of sediment in streams.

j. Within 10 days of the date that construction of the project has started, the docket holder shall notify the DRBC of the starting date and scheduled completion date.

k. Within 30 days of completion of construction of the approved project, the docket holder is to submit to the attention of the Project Review Section of DRBC a Construction Completion Statement (“Statement”) signed by the docket holder’s professional engineer for the project. The Statement must (1) either confirm that construction has been completed in a manner consistent with any and all DRBC-approved plans or explain how the as-built project deviates from such plans; (2) report the project’s final construction cost as such cost is defined by the project review fee schedule in effect at the time the application was made; and (3) indicate the date on which the project was (or is to be) placed in operation. In the event that the final project cost exceeds the estimated cost used by the docket holder to calculate the DRBC project review fee, the statement must also include (4) the amount of any outstanding balance owed for DRBC review. The outstanding balance will equal the difference between the fee paid to the Commission and the fee calculated on the basis of the project’s final cost, using the formula and definition of “project cost” set forth in the DRBC’s project review fee schedule in effect at the time application was made.

l. The WWTP modifications shall be completed within three years of approval of this docket or the docket holder shall demonstrate to the Executive Director that it has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval. If the modifications have not been completed within three years of Docket Approval and the docket holder does not submit a cost analysis demonstrating substantial funds have been expended, Commission approval of the modifications to the existing WWTP shall expire. If the approval for these modifications expires under this condition, the docket holder shall file a new application with the Commission and receive Commission approval prior to initiating construction of any modifications.

m. The docket holder is permitted to treat and discharge wastewaters as set forth in the Area Served Section of this docket, which incorporates by reference Sections B (Type of Discharge) and D (Service Area) of the docket holder’s Application to the extent consistent with all other conditions of this DECISION Section.

n. The docket holder shall make wastewater discharge in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property.

o. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

p. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

q. The issuance of this docket approval shall not create any private or proprietary rights in the waters of the Basin, and the Commission reserves the right to amend, suspend or rescind the docket for cause, in order to ensure proper control, use and management of the water resources of the Basin.

r. Prior to allowing connections from any new service areas or any new developments, the docket holder shall either submit and have approved by the Executive Director of the DRBC a NPSPCP in accordance with Section 3.10.3.A.2.e, or receive written confirmation from the Executive Director of the DRBC that the new service area is in compliance with a DRBC approved NPSPCP.

s. The docket holder shall prepare an EMP within six (6) months of docket approval. The docket holder shall submit the EMP and certify in writing to the Commission that it has complied with this condition by March 12, 2013.

t. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below (or the later date established by an extension that has been timely requested and approved), the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

u. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

v. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the Rules of Practice and Procedure. In

accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

w. The docket holder may request of the Executive Director in writing the substitution of specific conductance for TDS. The request should include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow the substitution of specific conductance for TDS monitoring.

x. The docket holder is prohibited from treating/pre-treating any hydraulic fracturing wastewater from sources in or out of the Basin at this time. Should the docket holder wish to treat/pre-treat hydraulic fracturing wastewater in the future, the docket holder will need to first apply to the Commission to renew this docket and be issued a revised docket allowing such treatment and an expanded service area. Failure to obtain this approval prior to treatment/pre-treatment will result in action by the Commission.

BY THE COMMISSION

DATE APPROVED:

EXPIRATION DATE: October 31, 2017